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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/763,727

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Minggao Yao

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EXAMINER

RENNER, CRAIG A

ART UNIT

PAPER NUMBER

2627

MAIL DATE

DELIVERY MODE

06/09/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/763,727	Applicant(s) YAO ET AL.	
	Examiner Craig A. Renner	Art Unit 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 March 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114 was filed in this application after a decision by the Board of Patent Appeals and Interferences, but before the filing of a Notice of Appeal to the Court of Appeals for the Federal Circuit or the commencement of a civil action. Since this application is eligible for continued examination under 37 CFR 1.114 and the fee set forth in 37 CFR 1.17(e) has been timely paid, the appeal has been withdrawn pursuant to 37 CFR 1.114 and prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 26 March 2009 has been entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 10-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. In line 6 of claim 10 and line 5 of claim 16, each instance of “the last conductive material layer comprising a gap” is indefinite as it is misdescriptive of the disclosure, which teaches/shows that the last conductive material layer (712, Figure 7b) does not comprise a gap (paragraphs [0016]-[0017]). **It is suggested** that applicant

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delete the limitation “, the last conductive material layer comprising a gap” in order to overcome this deficiency.

b. In lines 10-11 of claim 10 and lines 9-10 of claim 16, each instance of “wherein a first bonding pad is placed in the gap of the last conductive material layer” is indefinite as it is misdescriptive of the disclosure, which teaches/shows that a first bonding pad (716, Figure 7b) is placed upon the last conductive material layer (712, Figure 7b, paragraphs [0016]-[0017]). **It is suggested** that applicant amend this limitation to read “wherein a first bonding pad is placed ~~in the gap of~~ upon the last conductive material layer” in order to overcome this deficiency.

c. Claims 11-15 and 17-21 inherit the indefiniteness associated with their respective base claims and stand rejected as well.

Pertinent Prior Art

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. This includes Takeuchi et al. (US 2002/0070637) and Takeuchi et al. (US 6,498,419), which each individually teaches a piezoelectric actuator with a last layer applied being a conductive material layer with a bonding pad formed thereon.

Allowable Subject Matter

5. Claims 10-21 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

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6. The following is a statement of reasons for the indication of allowable subject matter:

The closest prior art is Takeuchi et al. (US 6,498,419), which teaches an actuator component (refer to FIGS. 7 and 8, for instance) comprising at least one layer of electrically-conductive material (28); and at least one layer of electrically-insulative material (26), wherein the conductive material and the insulative material are to be applied to an actuator finger (20) one layer upon another in an alternating manner wherein the last layer applied is a conductive material layer (30), the last conductive material layer comprising a gap (as shown in FIG. 8, for instance), and the layer of insulative material is applied to the actuator finger and sandwiches a conductive layer (28) between the insulative layer and the actuator finger, and wherein a first bonding pad (34) is placed on the last conductive material layer, and a second bonding pad (32) and a third bonding pad (shown in FIG. 8, for instance) are placed on opposite ends of the actuator finger. Takeuchi et al. (US 6,498,419), however, does not teach nor suggest that the layer of insulative material is wider than the layer of conductive material such that an insulative layer at least partially encloses and electrically isolates the conductive layer latitudinal to the actuator finger. The prior art that teach this limitation accomplish such by having the last layer applied be the insulative material layer, which teaches away from what is being claimed, i.e., the last layer applied being the conductive material layer, and therefor are not combinable.

Response to Arguments

7. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Craig A. Renner whose telephone number is (571) 272-7580. The examiner can normally be reached on Tuesday-Friday 9:00 AM - 7:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, A. L. Wellington can be reached on (571) 272-4483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Craig A. Renner/
Primary Examiner, Art Unit 2627

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